The Future of Retirement in the United States

Testimony submitted to

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Special Committee on Aging
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by

Jagadeesh Gokhale,
Senior Fellow
Cato Institute

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Thank you for this opportunity to testify on future retirement prospects in the United States. I feel extremely honored to have received it.[1]

My testimony is in three parts. First, I provide an economic overview of factors that will determine future economic growth which, in turn, will determine retirement living standards over coming decades. This section identifies the types of policies that appear necessary to maximize each factor's contribution to future growth. It concludes that a faster rate of saving and capital formation is crucial to sustain high economic growth.

Next, I provide an overview of the long-term federal budget implications of current fiscal policies with particular emphasis on Social Security and Medicare finances. This section concludes with a recommendation for a budget-accounting reform for the federal government.

Finally, I describe the potential hazards households could face from participation in tax-deferred saving plans. "Back-loaded' tax-favored plans such as 401(k)s and traditional IRAs—that permit tax-free accumulations before retirement and subject post-retirement withdrawals to income taxes—could end up harming some households on a lifetime basis. This is especially true for low earners who receive moderate to high rates of return on their plan contributions. In contrast, 'front loaded' plans are likely to be more effective as saving incentives. However, when considering the overall efficiency of such tax incentives in promoting greater national saving, it is important to also consider the nature of future tax and spending policy adjustments that are employed to compensate for lost federal revenues.

Part I: Economic Overview

Retirement has been widespread in America during the past few decades because of robust growth in national output: The huge size and productivity of the baby-boom generation ensured sufficient resources for extending generous support to their retired grandparents and parents—who, on the whole, suffered much smaller declines in their post-retirement living standards compared to retirees in the prewar period.

Many are questioning whether the baby-boomers themselves will be able to continue enjoying living standards close to their pre-retirement ones after they exit the workforce. I present some calculations to indicate the size of transfers that must occur to support a growing older population.

I. Bulge in the Retiree Cohort: Population projections by the Social Security Administration indicate that between the year 2003 and 2030, the number of working-aged individuals (those aged 20-64) will increase by just 13.3 percent. The number of those aged 65 and older, however,

[1] I am Jagadeesh Gokhale, Senior Fellow at the Cato Institute in Washington D.C. I have conducted several studies on federal fiscal policy including Social Security and Medicare. I have also written on labor markets, national saving, inequality, and intergenerational transfers, and the (in)adequacy of saving and life insurance in the United States. I have also analyzed the potential financial hazards households could face over their lifetime from participating in tax-deferred saving plans.

will increase by 93.1 percent. (These rates of population increase were 51.6 percent and 71.1 percent respectively during the previous 30 years.)

Table 1
Average Annual Consumption and Total Present Value of Resources
Total Versus Retiree Populations

	Age Group	
	20 and older	**65 and older**
Average Annual Consumption Outlays (Thousands of constant 2003 dollars)		
1960-61	16.8	12.4
1987-90	27.3	28.2
Percent change	62.6	126.8
Total Resources by Age Cohort (Present values in thousands of constant 2003 dollars)		
1960-61	283.3	161.3
1987-90	453.8	314.1
Percent change	60.2	94.8

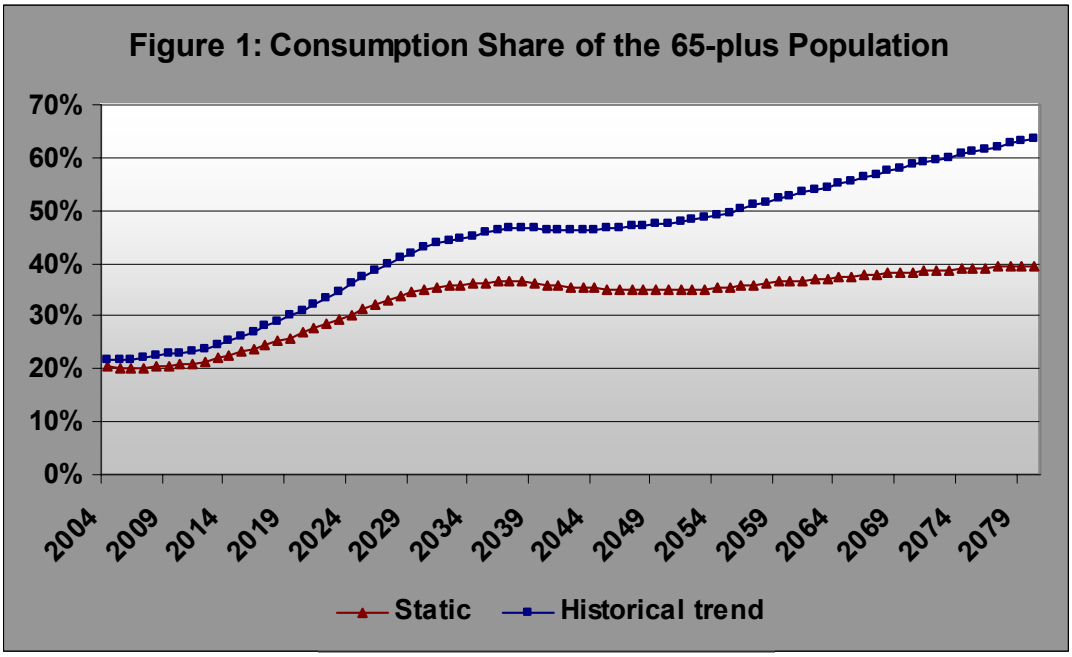
Source: Author's calculations based on *Understanding the Postwar Decline in U.S. Saving: A Cohort Analysis* by Jagadeesh Gokhale, Laurence J. Kotlikoff, and John Sabelhaus; Brookings Papers on Economic Activity, I:1996.

Table 1 shows that compared to their counterparts in the early 1960s, those who were aged 65 and older in the late 1980s enjoyed a 95 percent increase in resources per capita and spent 127 percent more on consumption per capita. Overall, however, total resources and average annual consumption per person increased by only about 60 percent.

This information can be used to project retiree consumption under "static" and "historical growth" assumptions. In the static case, I assume that per capita annual consumption will stay constant for everyone through the foreseeable future. I also assume that consumption of the 65-plus group relative to that of the overall population is the same today as it was in 1987-90—again a static assumption. Under these assumptions, I calculate that annual consumption of the 65-plus group equals 20 percent of total consumption in 2004. Projecting consumption into the future using population projections suggests that by 2030, the 65-plus group will consume about 35 percent of total consumption. Their "static" consumption share continues to increase gradually through 2080 (see Figure 1).

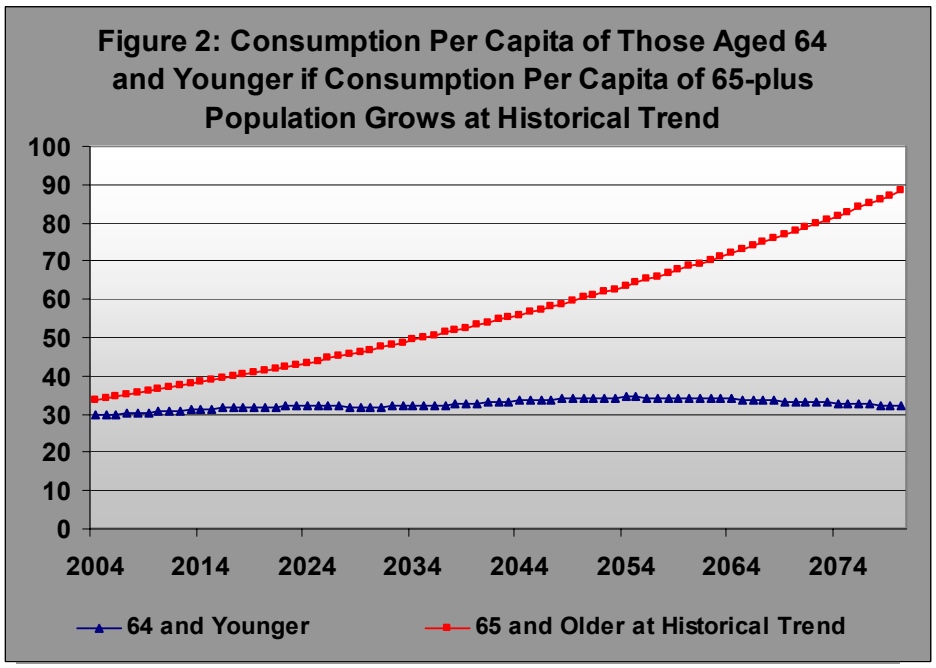
During the 1970s and 1980s, rising health-care cost was the main impulse underlying consumption growth for the 65-plus population. Medicare actuaries project that those costs will continue outpacing overall economic growth as retirees use more intensively newer, more effective, but costlier health care technologies. Hence, I make an alternative projection that is consistent with "historical trends" in consumption growth for the 65-plus and the overall population. First, I calculate the relative consumption per capita of the 65-plus to total population in 2004 by applying the average annual growth rate in consumption between 1960-61 and 1987-90 (see Table 1). Future per-capita consumption is also assumed to grow at these differential rates for the 65-plus and the overall population. This yields in the "historical trend"

projection shown in Figure 1. Here, the share of consumption by the 65-plus group equals 22 percent in 2004 and it nearly doubles by 2030—to 43 percent. After 2030, it continues to increase at a more rapid pace compared to the "static" projection.



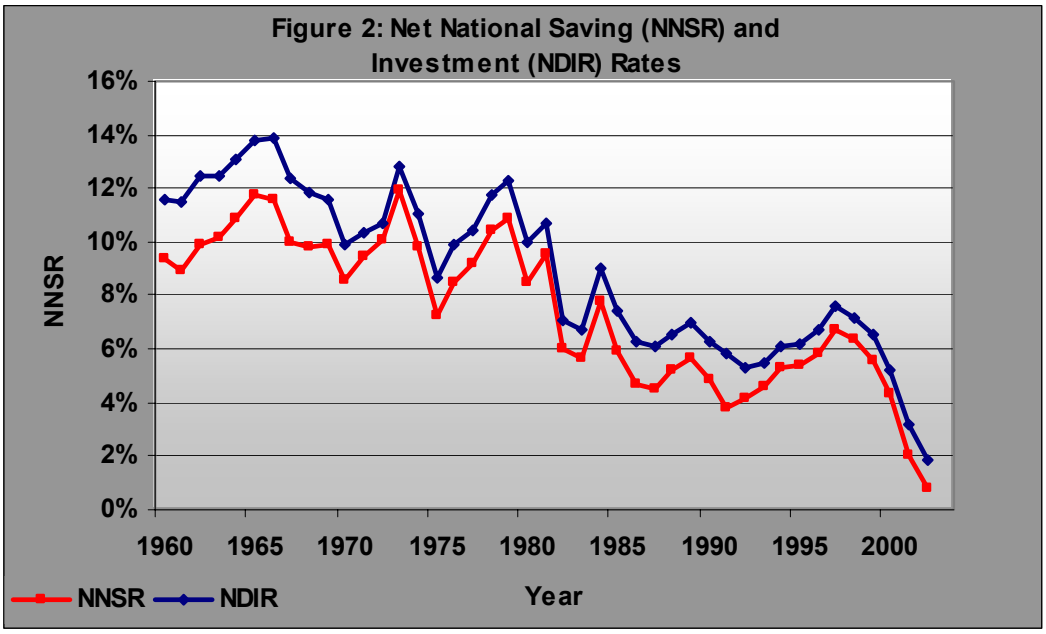
Source: Author's calculations.

What are the implications of allowing retiree consumption per capita to grow at historical rates? Figure 2 contains the answer: It shows that the consumption per capita of those 64 and younger would have to be kept essentially constant throughout this century in order to transfer the needed resources to retirees.



II. Growth in Output: The amount of resources that future retirees will be able to access will depend on the rate of future economic growth realized in the United States. The rate of growth will depend upon the growth of inputs—*labor* and *capital*—and their *productivity*.

A. Capital growth: Capital formation is constrained by the amount Americans save and can borrow from abroad. During past decades, the *net national saving rate* –the amount not consumed out of net national output as a share of output—has trended down, pulling with it the *net domestic investment rate*—investment net of capital consumption as a share of national output (see Figure 2). The investment rate has been sustained above the saving rate because foreign savers have chosen to direct their savings to the United States for investment. Prior to 1975, the net national saving averaged more than 10 percent. Since then, however, it has trended down to being barely positive in 2001. There is considerable uncertainty about how much of foreign savings the U.S. will continue to receive in the future. The fact that net domestic investment has also trended down along with the net saving rate suggests that national saving constrains domestic capital formation.



Source: Author's calculations based on data from the Bureau of Economic Analysis.

National saving is the sum of saving by households, businesses, and the government. The recent decline in national saving is primarily the result of high government deficits. However, household consumption levels have also remained high as households have been able to cash out their rapidly appreciating home equities.

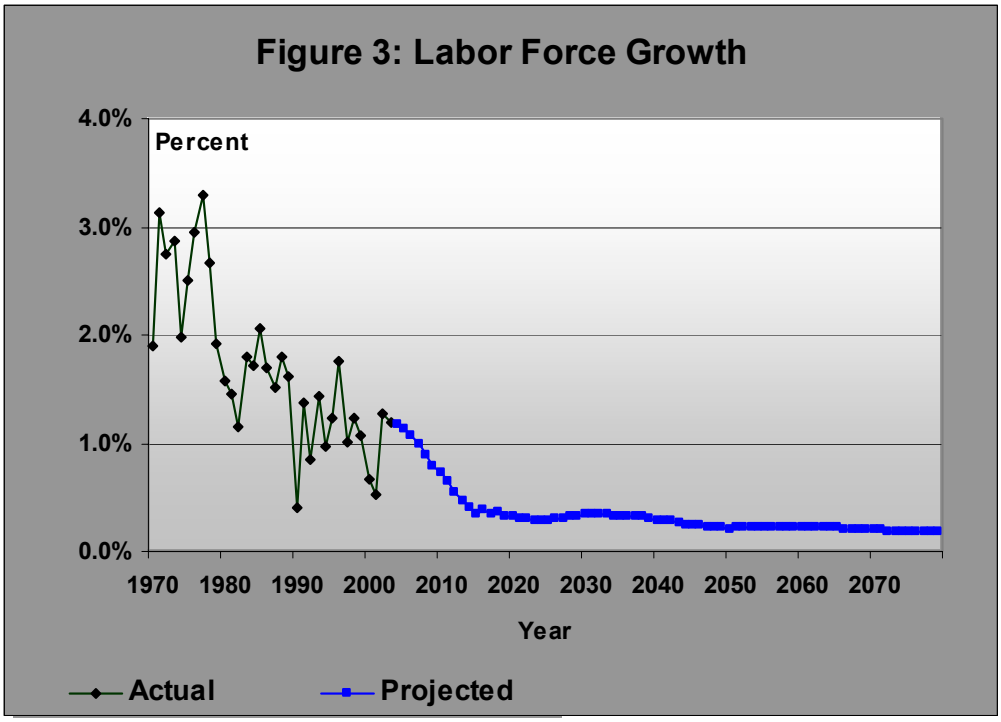
Furthermore, continued dependency on foreign savings implies a need to repay it with interest—reducing Americans' claims on future national output. If the trend of declining national saving were to be reversed, we would be less dependent on foreign savings to finance domestic investment.

Conclusion: *Need to provide effective incentives for Americans to save and invest.*

B. Labor force growth: Beginning in just a few years, labor-force growth is expected to slow simply because more baby-boomers will retire than the number of young-adults entering the labor force.

An immigration-friendly policy can help alleviate labor shortages that appear imminent.

Another way to counter slower labor-force growth is to increase the growth of the "effective" work-force by increasing worker skills. Many consider education and job-training subsidies to be effective means of upgrading worker skills and education. Such subsidies probably help, but are not necessarily the most effective means of promoting skill acquisition. At the margin, they may generate larger school systems that produce degreed graduates but not necessarily with additional skills. The real proof of skill acquisition is higher future labor earnings. Hence, a more effective inducement to skill acquisition would be the ability to retain the higher earnings as disposable income. Tax rates may be low today, but workers (and savers) must *believe that they will remain low* for them to make the desirable choices.



Source: Author's calculations based on projections made by the Social Security Administration.

Labor force growth may not slow as much as projected if promised Social Security and Medicare benefits cannot be paid. A shortfall in retirement resources may force some workers to stay in the labor force longer, and induce some recently retired individuals to return to work.

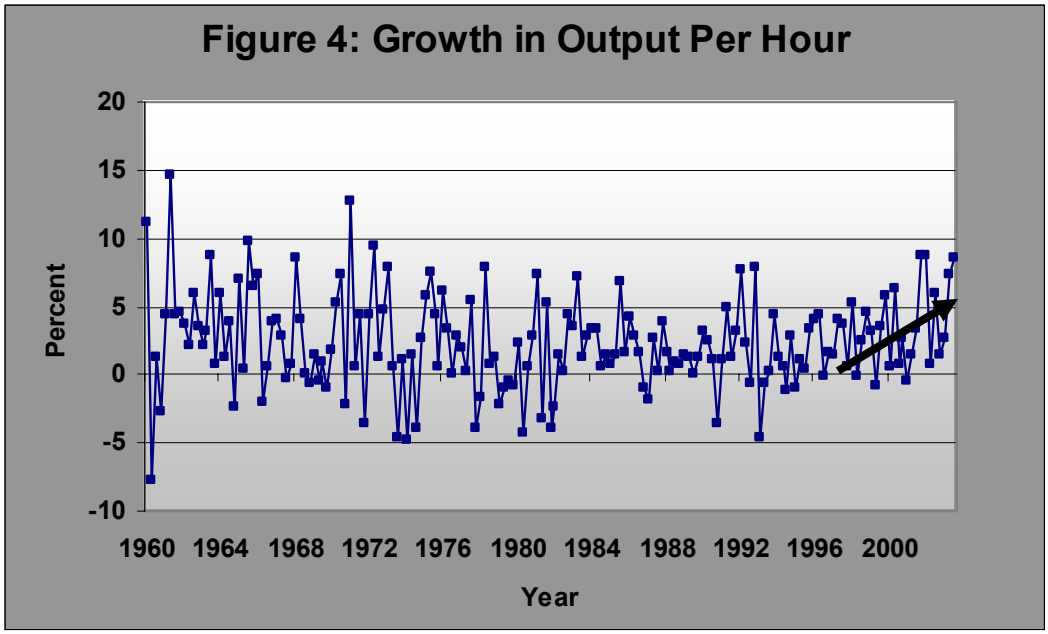
Conclusion: *Need to maintain a credible low-tax environment for increasing the "effective" labor force.*

C. Productivity growth: Productivity growth remained surprisingly high during the 2001/2 recession and has surged thereafter. Most observers ascribe this to continued diffusion of internet and IT technologies through other "old" sectors. If productivity continues to improve, it could (perhaps more than) offset the decline in output growth because of slower labor-force growth. Researchers have documented that in earlier episodes of technological breakthroughs (steam engine, electricity), the new technology's diffusion throughout the economy took several decades to complete.

Unfortunately, whether the "new economy" will be fleeting or is here to stay is extremely difficult to predict. Moreover, continued productivity growth has usually resulted from successive technological breakthroughs, not from applying the same technology repeatedly.

Because of the slower projected labor force growth, uncertainty about how long superior productivity growth will last and because, at source, continued technological advances require prior capital investments, *increasing the rate of saving and capital formation—both physical and human—is likely to be the most important determinant of future retiree (and overall) living standards.*

Conclusion: *Higher saving and investment are critical; needed to fuel continued Tech. advance*



Source: Bureau of Labor Statistics.

Summary: Future retiree living standards will be determined by the size of future national output and the amount we allocate for retiree consumption. Output growth depends on the growth of future production factors and their productivity. Given that labor force growth will shrink and

the sustainability of the current high productivity growth is uncertain, the rate of acquisition of human and physical capital will be the most significant determinant of future output growth and living standards.

Part II: Social Security, Medicare, and the Federal Budget

Social Security is the most important source of retirement support, and Medicare provides the overwhelming portion of retiree medical care.[2]

Financial projections for the Social Security (OASDI) program that I constructed as of fiscal year-end 2002 suggest that it has a "fiscal imbalance" of $7 trillion. These projections consider the program's entire future without limit.[3] This figure shows the size of the total future financial shortfall that Social Security faces.

Here's another way to interpret the $7 trillion number: It is the amount of money the federal government must have on hand *today*, invested in an interest earning account, in order to *never* have to change future Social Security payroll taxes or benefit rules.[4] Not having this amount on hand, of course, implies that future Social Security benefits must be cut, or future payroll tax revenues must be increased to raise an equivalent amount of resources ($7 trillion in present discounted value) to eliminate Social Security's financial imbalance.

My calculations show that the accumulated value of past taxes and benefits plus the present discounted value prospective taxes and benefits of those currently alive (as of 2002) equals $8.7 trillion. This amount is called the "generational imbalance."

Since the program's total financial shortfall (throughout the future) equals $7.0 trillion and the shortfall on account of past and currently alive generations equals $8.7 trillion, easy math says that future generations contribute excess taxes of $1.7 trillion dollars in present value (as of 2002).

A positive fiscal imbalance (the $7.0 trillion) implies that the program's current rules are not sustainable. Someone must pay more or receive less than they are scheduled to under those rules.

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[2] Social Security provides 37.6 percent of income for those over 65—more than earnings (20.7 percent), asset income (19.9 percent), employer benefits (18.7 percent), and other sources (3.1 percent). (Monthly Labor Review: http://www.bls.gov/opub/ted/2001/May/wk3/art03.htm)

[3] The numbers I cite here are taken from my study with Kent Smetters: *Fiscal and Generational Imbalances: New Budget Measures for New Budget Priorities.* All dollar figures cited here are as of the end of fiscal year 2002.

[4] The calculations in the study cited in footnote 3 extend the Office of Management and Budget's fiscal projections as of fiscal year-end 2002. They use OMB's economic assumptions and the Social Security Administration's population projections. OMB's economic assumptions incorporate a higher rate of interest than the rate used by the Social Security Administration when calculating present discounted values of future budget calculations reported in the 2003 Social Security Trustees' report. I believe that the appropriate rate of discount is that which the federal government must pay on long-term borrowing (reflecting its true opportunity cost of obtaining funds), and not the average rate on the maturity range of non-marketable Treasury Securities that are held in the Social Security Trust Fund.

If we postpone making any changes to Social Security's tax and benefit rules for a sufficiently long time and then change them to eliminate the imbalance, today's (2002's adult) generations will receive excess benefits over their payroll taxes worth $8.7 trillion and future generations will pay $8.7 trillion in excess taxes over benefits—$1.7 trillion that they are scheduled to pay under current rules plus $7.0 trillion in additional taxes levied via changes in the distant future.

Alternatively, we could make rule changes now and reduce the excess benefits of current generations down from $8.7 trillion under current rules. The main point here is that a calculation of fiscal and generational imbalances allows us to understand the trade-offs available in choosing between alternative ways of restoring balance to the Social Security system.

Fortunately, the Social Security's actuaries have already begun reporting the fiscal and generational imbalance measures, and Medicare is to begin reporting them Medicare beginning with this year's Medicare Part A (Health Insurance) Trustees' report. Similar calculations would be useful for the entire federal government as well.

According to my calculations, Medicare's fiscal imbalance amounts to $36 trillion in present value (as of fiscal year-end 2002), using standard assumptions for projecting future health care outlays.
Medicare, Part A, which covers inpatient hospital and other services, faces a financial imbalance of $20.5 trillion and a generational imbalance $8.5 trillion. That is, both future and living generations are scheduled to receive more than they will pay in Medicare payroll taxes.

Medicare Part B's fiscal imbalance amounts to $16.5 trillion dollars and its generational imbalance equals $6.6 trillion. These imbalances include the un-dedicated general revenue transfers that finance approximately 75 percent of Medicare Part B's outlays.

Medicare's imbalances cited above do not include the effects of the prescription drug coverage enacted in 2003. Independent calculations show that law to add $8 and $13 trillion in Medicare's long-term financial shortfall.

Hence, Social Security and Medicare (including prescription drugs) altogether contain a total fiscal imbalance of between $50 and $60 trillion.

As of fiscal year-end 2002, federal non-Social Security and non-Medicare programs ("rest-of-federal government) contributed only $0.5 trillion in present value to the total federal fiscal imbalance. However, federal defense and non-defense discretionary spending has recently been growing at a very rapid pace. Were these calculations to be updated, I am confident that the rest-of-federal government's fiscal imbalance would be considerably larger.

As of fiscal year-end 2002, I had estimated total federal fiscal imbalance at $44.2 trillion. Eliminating an imbalance of that magnitude, by my calculations, would require a more than doubling the payroll tax rate *immediately and permanently*. Alternatively, income tax revenues would have to be increased by about 70 percent, again immediately and forever. If spending cuts are considered, future Social Security and Medicare benefits would have to be cut by 45 percent.

Eliminating federal discretionary outlays today (as of 2002) and forever would not have been sufficient to eliminate federal fiscal imbalance

These required policy changes to raise the resources necessary to pay for scheduled government outlays are drastically large and would devastate the economy. However, waiting to make policy changes would make the cost of doing so even more. The simple reason for this is that, just like debt, fiscal imbalances accrue interest. Not dealing with the imbalance now means today's generations receive a windfall gain (they don't pay any additional dollars toward closing the funding gap), and future generations must finance this 'giveaway'—that is, bear a higher fiscal burden.

Implications: The size of federal unfunded obligations calculated here mirror the calculations of Part I: where it was shown that the transition of the baby-boomers into retirement requires a massive shift in consumption toward the elderly. Part II shows, that continuing on the current public policy course is not feasible and massive policy changes are required to bring federal revenues and outlays—that are used to effect the transfer of consumption resources—into balance.

Were retirements in the United States fully funded—perhaps self-financed through mandatory personal savings—the boomers would by now have accumulated much more by way of financial assets. Correspondingly, the U.S. economy would have been much better capitalized and worker productivity and incomes would have been higher than it is today. That would mean higher national output to be distributed toward retirees. And retirees would have the necessary financial claims to use to facilitate that transfer. The financial and real economy would work in complementary fashion to achieve retiree economic security.

First: A big chunk of the consumption transfer toward retirees occurs via pay-as-you-go Social Security and Medicare. By design and because of their generosity toward earlier generations of retirees, these programs face massive unfunded obligations and must depend upon future payroll tax revenues to continue paying retirement benefits. Their pay-as-you-go financial design is such that the very act of extinguishing benefit obligations to current retirees creates new and larger obligations to today's workers (future retirees). And, the expectation of future benefits and the burden of payroll taxes render workers unwilling and unable to accumulate savings. This leaves the economy with less capital and lower worker productivity.

Second: Although the current impasse is mostly generated by unavoidable demographic developments, the tools of fiscal analysis that are currently employed to assess future policy choices—backward-looking measures such as national debt and short-horizon projections of annual deficits—are ill suited for clarifying the fundamental choices policymakers face. Had fiscal and generational imbalance measures been regularly published by official budget reporting agencies during the past several decades, policymakers would have been more fully informed and may have begun addressing the oncoming resource crunch.

Third: It would be better to move away from continuing to finance the transfer of consumption toward retirees through pay-as-you-go programs such as Social Security and Medicare. Although these programs are thought to have been very successful in eliminating poverty in the past, that

success has likely been very costly in terms of the cumulative loss--over 7 decades in the case of Social Security and 4 decades in the case of Medicare—in the economy's capitalization and productivity growth. Unfortunately, these costs are not readily observed, which prevents a balanced assessment of these programs' net economic contribution.

Part III: Saving Incentives

The demographic changes slowing work-force growth cannot be easily countered except through massive immigration. That leaves capital accumulation—to increase output via more machines, better worker skills, and better technology—which requires greater saving.

Basic economic theory suggests that in a world with perfectly functioning capital markets and rational individuals, providing saving incentives through tax-policy would be sub-optimal. A subsidy to saving would generate a welfare-lowering distortion in the consumption-saving trade-off that people face.

However, we have (inherited) an economy that already contains considerable saving disincentives—in the form of public transfer programs that lower the return to saving, reduce households' abilities to save because of heavy income and payroll taxation, and transfer resources from high savers (the young) to low savers (retirees). In addition, raising revenues through income rather than consumption taxation results in heavier taxation of resources devoted to future rather than current consumption via saving: Earnings are taxed before saving occurs and the return to saving is taxed again in through interest and dividend taxes. This makes current consumption cheaper relative to future consumption—leading to lower household saving. The provision of saving incentives in such a world is equivalent to reversing existing economic distortions that reduce saving.

Unfortunately, providing tax incentives that generate substantial *new* saving is not easy. The incentive must come in the form of lowering the price of future consumption relative to current consumption. However, simply providing a subsidy to future consumption (by increasing the after-tax return on asset income) generally increases a household's net lifetime resources. For those who would have saved even in the absence of the tax-subsidy, the increase in lifetime resources may stimulate more rather than less current consumption. The consensus view in the economics profession is that only about 25-30 percent of contributions into tax-favored saving accounts represent net additions to saving.

The multiplicity of tax-deferred saving vehicles and complexity of rules may have discouraged some potential savers from participating in tax-favored saving plans. The complexity of "back-loaded" saving vehicles [401(k)s and regular IRAs] is not restricted to their rules; it also emerges from potential interactions with income tax rules, including taxes on Social Security benefits, itemized deductions and exemptions.

A recent study that I co-authored analyzes the potential lifetime gains from participating in 401(k) plans and Roth IRAs. These plans are almost universally recommended for households as a way of saving on their lifetime taxes. However, the study's surprising result is that low-earners who make substantial contributions to their 401(k) accounts and receive moderate to high

rates of return on those contributions, could end up paying *more* in taxes on a lifetime basis. Hence, such households would enjoy *smaller* lifetime consumption because of their participation in such plans.

This counter-intuitive result arises because of the tax interactions of "back-loaded" plans mentioned earlier. To summarize briefly, participation in such plans lowers current taxes, but increases future taxes. The extent of current and future tax changes depend on participants' tax brackets when contributing versus when withdrawing from such plans. The changes in these tax-brackets can be potentially quite large—depending on the sizes of contributions and the rates of return earned on plan balances through retirement. Large account accumulation through retirement can trigger larger withdrawals, pushing participants into higher tax brackets relative to those faced without participation. In addition, high withdrawals can potentially increase the amount of Social Security benefits that become subject to tax and can result in a greater phase-out of itemized deductions relative to non-participation.[5] Finally, plan contributions can potentially lower participants' tax brackets when working, and reduce the value of itemized deductions and exemptions, again compared to non-participation.

Using a model of lifetime consumption and saving that incorporates in considerable detail provisions of the federal income tax, state taxes, and Social Security taxes and benefits, the study calculates the implications of participating in 401(k) plans and Roth IRAs for stylized households at different income levels.[6]

Table 2 shows results for low income households. The calculations incorporate the provisions of the Economic Growth and Tax Relief Reconciliation Act of 2001 which expanded contribution limits on several types of plans, including 401(k), 403(b), Keogh, traditional and Roth IRAs.[7] EGTRRA also provides a non-refundable tax credit for qualified account contributions up to $2000 for households with low earnings, which phases out for households with AGI larger than $50,000). Because this credit is sunset, and the phase-out dollar thresholds are not indexed, the tax-treatment of plan participants was calculated under alternative assumptions about whether the credit is indexed or not, and whether it is extended beyond 2010 or not.

The results show that in each case, some categories of low-earning households would pay more in lifetime taxes (present value of future taxes) if they participated in a "back-loaded" savings plan and received a moderate (6 percent) rate of return on their contributions. In addition, the tax interactions dilute the lifetime tax savings for even those households that benefit, on net, from participating in "back-loaded" plans.

[5] The Economic Growth and Tax Relief Reconciliation Act gradually removes the limitation of itemized deductions between 2006 and 2010, but the limitation is reinstated in 2011 when this EGTRRA provision is sunset.
[6] "Who Gets Paid to Save" by Jagadeesh Gokhale and Laurence J. Kotlikoff published in *Tax Policy and the Economy*, NBER, vol 17, 2003, pages 111-39.
[7] For results on stylized households at higher earning levels, see Gokhale and Kotlikoff cited in footnote 5.

Table 2: The Percentage Change in Lifetime Taxes and Spending from 401(k) Participation Under Alternative Assumptions For Selected Household Earning Less Than $50,000 6.0 Percent Real Rate of Return						
Age-25 Earnings	401(k) and Traditional IRA				Roth IRA	
	Non-Refundable Tax Credit Not Extended and Not Indexed		Non-Refundable Tax Credit Extended and Indexed			
	Taxes	Spending	Taxes	Spending	Taxes	Spending
25,000	1.35	-0.29	-0.68	0.02	-8.96	1.29
35,000	-0.68	0.05	-2.08	0.34	-3.85	0.77
50,000	1.07	-0.36	0.58	-0.24	-3.25	0.81

Note: Lifetime taxes and spending refer to the present values of the couples' annual taxes and spending on consumption, housing, college tuition, and life insurance premiums.

Despite the non-refundable credit for low earners, Table 2 shows that some low earner households would lose on a lifetime basis from participating in 401(k) plans and IRAs.

How many U.S. households actually face this jeopardy? I am currently co-writing a study on this issue using survey data from the Board of Governors of the Federal Reserve. A preliminary result from this study suggests that roughly 10 percent of participating households may suffer an increase in lifetime taxes (and a reduction in lifetime consumption) as a result of continued participation at their current levels in 401(k) plans.[8]

Because Roth IRA contributions are made from post-tax resources and withdrawals are not subject to tax, participating in such "front-loaded" plans does not result in the tax-interactions described above for "back-loaded" plans. Hence, Roth IRA-type incentive plans provide a lifetime tax subsidy even at low earning levels. The new proposals to introduce Retirement Savings Accounts and Lifetime Savings Accounts are structured similar to Roth IRAs and, therefore, should work better as saving incentives compared to 401(k) plans and traditional IRAs. They may be also better than Roth-IRAs because of their simpler regulations.

The remaining concern about all such (traditional- and Roth-IRA-type) saving incentives is their impact on the federal budget. Providing tax-incentives to promote greater saving implies a loss of federal revenue. Absence of other concurrent tax or spending changes to make up the revenue loss implies a larger accumulation of debt, which must ultimately must be serviced or re-paid through future tax or spending adjustments. If short term deficits are increased, they could soak up privately investible savings and produce only minor net addition to the capital stock, if any. If concurrent tax or spending changes are included to avoid larger debt accumulation, those tax-policy initiatives may partly or fully offset the initial saving incentives. Therefore, judgment

[8] The study finds that 7 percent of all households may pay more in lifetime taxes by participating in 401(k) plans using survey data pertaining to 1995. A recent KPMG retirement study finds that in 1995, about 65 percent of employees participated in employer sponsored tax-deferred saving plans.

about the efficacy of such incentives requires careful consideration of the tax structure on a revenue neutral basis.

Conclusion: The impending entry of baby-boomers into retirement will require a steep increase in retiree consumption. Even if real consumption levels per capita stay constant, retirees will consume an additional 15 percent of national output by the year 2030 compared to today. If retiree consumption levels are to continue increasing at historical rates, the transfer of consumption toward retirees will have to be doubled by the year 2030 compared to today. To achieve this result, the consumption of per-capita consumption of younger cohorts will have to be kept constant at today's levels.

The rate at which retiree consumption can grow will be constrained by the rate of growth of national output. Unfortunately, the transition of baby-boomers into retirement implies significantly slower labor-force growth. Declining national saving is constraining domestic capital formation despite sizable borrowing from abroad. Finally, although productivity growth has trended up recently, we have little information about the sustainability of such a trend. Maintaining high productivity requires rapid capital formation and human skill acquisition—both of which necessitate higher rates of saving and investment.

The allocation of consumption resources toward retirees is accomplished in the United States through public transfers via Social Security and Medicare. Both of these programs face sizable fiscal imbalances. Social Security's overall fiscal imbalance equals $7 trillion and that of Medicare including the recently enacted Prescription Drug coverage for seniors is roughly 7 times as large as that of Social Security's. Restoring financial balance to these programs will require large tax/benefit changes. Understanding the trade-offs in making such policies requires us to carefully re-structure federal budget accounting systems.

Inducing greater saving through tax policies is desirable to rectify existing disincentives arising from income taxation and other public policies. Those policies are continuing to transfer sizeable amounts of resources from young workers with low propensities to consume toward older individuals with higher and growing consumption propensities. In addition, the pay-as-you-go financing structures of Social Security and Medicare sap workers' saving incentives and ability.

Providing greater saving incentives via Roth-type tax-favored plans is superior than via traditional IRA or employer sponsored 401(k) plans. The latter plan-types allow tax-free contributions, but withdrawals are subject to the income tax. These features generate interactions with other income tax provisions and reduce the lifetime tax-subsidy that "back-loaded" plans can provide. The initiatives to introduce Retirement Saving Accounts and Lifetime Saving Accounts are similar in design to Roth IRAs and impose fewer restrictions; hence, they should be more effective in encouraging greater net saving. However, their ultimate efficiency in increasing saving and investment will also depend upon how current and future tax and spending changes make up the lost federal revenue.